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A CASE OF GLAUCOMA SIMPLEX.

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THE peculiar interest of the case here reported resides in the progress of an attack of uncomplicated or simple glaucoma to comparative blindness without the usual symptoms consisting in or consequent upon an excess of ocular tension, with no pain, headache, etc. The diagnosis depended solely upon the recognition of the existence of a deep pathologic cupping of the disc.

Mrs. B., seventy-three years of age, an active and, for her age, a healthy woman, consulted Dr. Hewish for a simple defect of failure of vision, in the summer of 1894. Some three years ago she got glasses from an optician, but they had, of course, never proved satisfactory to her. Owing to myosis, examination of the eye-ground was impossible until temporary dilatation of the pupil had been secured through a mydriatic. The pathologic cup was at once recognized, and treatment by eserin was instituted. Vision of the right eye had become reduced to a mere macular perception of light, and of the left eye to a macular counting of fingers. At no time was the tension of the right eye above normal, and that of the left eye, if it were really at all "plus," was only very slightly so. The anterior chambers were quite normal in depth, or but very slightly shallower than normal. There was no injection of the conjunctiva, no sensitiveness to touch, and no marked corneal anesthesia. No headache, pain, or even discomfort of any kind had

at any time existed in or about either eye. This statement the patient persistently emphasized.

The patient absolutely refused operation, and under the circumstances we advised a temporary trial of systemic therapeutics. The patient had been confined to the house for a long time, and there was considerable constipation, but beyond this, except as regards some worry and trouble from recent family misfortunes, the woman was healthy, clear-minded, and for one of her age, very active. Laxatives, almost to purgation, and tonics were freely administered, out-of-door rides and walks ordered, and general hygienic reform instituted, but all without effect on the ocular condition. The vision, if possible, got worse. The eserin was continued for the two weeks in which we tried the measures directed to the general condition.

We now determined to have a thorough opthalmoscopic examination, not only for the purpose of establishing the diagnosis, but also to see if mydriasis would increase the vision and the tension, and to test the field,, etc. This had previously not been possible by both of us owing to the myosis. The pupils quickly responded to weak solutions of homatropin, and the disc-cuppings were found to be extreme, "undercut," typically glaucomatous in the highest degree. There was no venous or arterial pulsation of the vessels observable. Neither the tension nor the vision was noticeably increased by the mydriatic. Three days later, operation having been consented to, we performed iridectomy on the left eye. There was no gush of aqueous on opening the anterior chamber beyond that usual in normal eyes. Operation on the right eye was postponed because of the absolute normality of the tension, the almost complete blindness, and also because we concluded to await the results of the operation upon the eye that had some vision left, and that, if at all, was slightly firmer than the other. The operation, *per se*, was successful; *i. e.*, it was almost

wholly bloodless and carried out easily, and a fair-sized coloboma was secured. Healing was remarkably prompt and good, no iritis or other untoward symptom supervening. The eye is now as quiet as it has always been, but vision is not improved. All local applications, including eserin, have been discontinued; the pupils have returned to a normal size, show no tendency to mydriasis, and the tension remains as uninfluenced by the operation as it had been by the eserin.

It seems remarkable that a condition essentially glaucomatous, if we may trust the story told by the ophthalmoscope, should exist without what is undoubtedly held to be the essential symptom and characteristic of the disease, that is, increased tension. With the absence of abnormal tension there has always coexisted an absolute absence of the subjective symptoms of pain and irritation. The only trouble the patient has ever remembered or complained of is visual failure. She has never seen rainbow-rings or halos about a light. Of objective symptoms there has been no heightened tension, unless very slight indeed, in the one eye, the other having gone on to blindness without, so far as can be determined, any rise whatever. There has never been any conjunctival or corneal congestion or other disorder, no mydriasis, no marked corneal anesthesia or loss of transparency, no iris-abnormalism, etc.

The case is to be held, therefore, as an extreme and perfect illustration of "simple glaucoma," concerning which Fuchs has written:

The relation of glaucoma simplex to glaucoma inflammatorium has been the subject of manifold discussions. Since glaucoma simplex, on account of the absence of inflammatory symptoms, is entirely different externally from glaucoma inflammatorium, it was not recognized as glaucoma at all until the discovery of the ophthalmoscope. Even Von Graefe did not originally place glaucoma simplex under the head of glaucoma, but designated it as amaurosis with the excavation of the optic nerve.

Jaeger held to this view until the last, looking upon glaucoma simplex as an optic-nerve lesion *sui generis*—a "glaucomatous" optic-nerve lesion. At the present time, however, the majority of ophthalmologists place glaucoma simplex under the head of glaucoma proper, since it has in common with its most essential symptom, the increase in tension. The inter-connection of simple and inflammatory glaucoma is also proved by the numerous intermediate varieties which form a continuous transition from simple to inflammatory glaucoma, so that no sharp line of distinction can be drawn between the two.

To these transition-forms belong, for example, the cases of glaucoma simplex with periodical obscuration of vision, and which are accompanied by transient cloudiness of the cornea, and often as well by a dull headache. Even in pure cases of glaucoma simplex, a constant headache sometimes exists, the dependence of which upon the glaucomatous process is proved by the fact that it disappears after iridectomy. A glaucoma simplex, later on in its course, often passes into acute or chronic inflammatory glaucoma, and cases also not infrequently occur in which, after inflammatory glaucoma has developed in the eye first affected, glaucoma simplex is present in the one which is affected afterward.

The inter-connection of the two forms of glaucoma shown from the above-mentioned facts has been doubted because in many cases of glaucoma simplex no evident increase of tension is demonstrable. In these cases we must assume that the lamina cribrosa is particularly yielding, so that it is forced backward by a pressure which does not perceptibly rise above the normal limits. Such cases, to be sure, are not always clearly distinguishable from simple atrophy of the optic nerve with unusually deep excavation. In doubtful cases the testing of the color-perception may furnish a diagnostic guide. In atrophy of the optic nerve color-blindness makes its appearance early, while in glaucoma the ability to distinguish colors is retained for a comparatively long time.

Our principal object in reporting this case is to emphasize two practical points of interest springing from it, and which convey profoundly important lessons:

1. *The ease with which such cases may be overlooked by the physician.* The absence of all objective and subjective symptoms, except the loss of vision and the one shown by the ophthalmoscope, illustrates the necessity of careful ophthalmoscopic examination in every case coming to the oculist. It is to be feared that such an examination is not absolutely invariable, and that the hasty diagnosis of "amblyopia" is, as it were, a garment that may cover a huge sin and lull the patient into a supposed security leading to blindness. It may also be noted that such cases as these make the descriptions of glaucoma in some of the text-books seem very insufficient. A very recent text-book makes glaucoma consist solely in an *increase* or abnormal degree of tension, without regard to the fact that with a highly subnormal power of resistance the process is truly glaucomatous without an abnormal elevation of tension. One cannot help wondering how frequently such cases may not be overlooked, called optic atrophy, etc.

2. *The crime, or what should be held a crime, of the optician in furnishing glasses without a physician's prescription.* The physician *may* overlook such cases, but the optician can by no possibility recognize them. We have personally known several such cases, and so no doubt has every oculist. The present case is a striking example. Had the patient, Mrs. B., three years ago consulted an ophthalmologist she would probably now have good vision instead of being blind. Instead of this she went to a popular optical firm, who if we had proper laws would not have dared to sell her glasses for glaucoma, or, if daring, would now be liable to a suit for heavy damages. Civilization demands that it should be made just as illegal and punishable to sell spectacles without a physician's prescription as it is for a pharmacist to prescribe drugs for any other disease of the human body.